#20

R. Hayes

ENTERED

OIPE

RAW SEQUENCE LISTING DATE: 09/11/2003
PATENT APPLICATION: US/09/577,468 TIME: 08:51:35

Input Set : N:\Crf3\RULE60\09577468.raw.txt
Output Set: N:\CRF4\09112003\I577468.raw

<110> APPLICANT: Stanley J. Wiegand
<120> TITLE OF INVENTION: MODIFIED CILIARY NEUROTROPHIC FACTOR, METHOD OF MAKING AND METHODS OF USE THEREOF
<130> FILE REFERENCE: REG 142-B1
<140> CURRENT APPLICATION NUMBER: 09/577,468
<141> CURRENT FILING DATE: 2000-05-24
<150> PRIOR APPLICATION NUMBER: US/09/454,380
<151> PRIOR FILING DATE: 1999-12-03
<150> PRIOR APPLICATION NUMBER: 09/373,834
<151> PRIOR FILING DATE: 1999-08-13
<160> NUMBER OF SEQ ID NOS: 23
<170> SOFTWARE: FastSEQ for Windows Version 3.0
<210> SEQ ID NO: 1
<211> LENGTH: 200
<212> TYPE: PRT
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 1

```
Met Ala Phe Thr Glu His Ser Pro Leu Thr Pro His Arg Arg Asp Leu
 1               5                  10                  15
Cys Ser Arg Ser Ile Trp Leu Ala Arg Lys Ile Arg Ser Asp Leu Thr
            20                  25                  30
Ala Leu Thr Glu Ser Tyr Val Lys His Gln Gly Leu Asn Lys Asn Ile
        35                  40                  45
Asn Leu Asp Ser Ala Asp Gly Met Pro Val Ala Ser Thr Asp Gln Trp
    50                  55                  60
Ser Glu Leu Thr Glu Ala Glu Arg Leu Gln Glu Asn Leu Gln Ala Tyr
65                  70                  75                  80
Arg Thr Phe His Val Leu Leu Ala Arg Leu Leu Glu Asp Gln Gln Val
                85                  90                  95
His Phe Thr Pro Thr Glu Gly Asp Phe His Gln Ala Ile His Thr Leu
            100                 105                 110
Leu Leu Gln Val Ala Ala Phe Ala Tyr Gln Ile Glu Glu Leu Met Ile
        115                 120                 125
Leu Leu Glu Tyr Lys Ile Pro Arg Asn Glu Ala Asp Gly Met Pro Ile
    130                 135                 140
Asn Val Gly Asp Gly Gly Leu Phe Glu Lys Lys Leu Trp Gly Leu Lys
145                 150                 155                 160
Val Leu Gln Glu Leu Ser Gln Trp Thr Val Arg Ser Ile His Asp Leu
                165                 170                 175
Arg Phe Ile Ser Ser His Gln Thr Gly Ile Pro Ala Arg Gly Ser His
            180                 185                 190
Tyr Ile Ala Asn Asn Lys Lys Met
        195                 200
```

RAW SEQUENCE LISTING DATE: 09/11/2003
PATENT APPLICATION: **US/09/577,468** TIME: 08:51:35

Input Set : **N:\Crf3\RULE60\09577468.raw.txt**
Output Set: **N:\CRF4\09112003\I577468.raw**

<210> SEQ ID NO: 2
<211> LENGTH: 200
<212> TYPE: PRT
<213> ORGANISM: Rattus norvegicus
<400> SEQUENCE: 2

```
Met Ala Phe Ala Glu Gln Thr Pro Leu Thr Leu His Arg Arg Asp Leu
 1               5                  10                  15
Cys Ser Arg Ser Ile Trp Leu Ala Arg Lys Ile Arg Ser Asp Leu Thr
            20                  25                  30
Ala Leu Met Glu Ser Tyr Val Lys His Gln Gly Leu Asn Lys Asn Ile
        35                  40                  45
Asn Leu Asp Ser Val Asp Gly Val Pro Val Ala Ser Thr Asp Arg Trp
    50                  55                  60
Ser Glu Met Thr Glu Ala Glu Arg Leu Gln Glu Asn Leu Gln Ala Tyr
65                  70                  75                  80
Arg Thr Phe Gln Gly Met Leu Thr Lys Leu Leu Glu Asp Gln Arg Val
                85                  90                  95
His Phe Thr Pro Thr Glu Gly Asp Phe His Gln Ala Ile His Thr Leu
            100                 105                 110
Met Leu Gln Val Ser Ala Phe Ala Tyr Gln Leu Glu Glu Leu Met Val
        115                 120                 125
Leu Leu Glu Gln Lys Ile Pro Glu Asn Glu Ala Asp Gly Met Pro Ala
    130                 135                 140
Thr Val Gly Asp Gly Gly Leu Phe Glu Lys Lys Leu Trp Gly Leu Lys
145                 150                 155                 160
Val Leu Gln Glu Leu Ser Gln Trp Thr Val Arg Ser Ile His Asp Leu
                165                 170                 175
Arg Val Ile Ser Ser His Gln Met Gly Ile Ser Ala Leu Glu Ser His
            180                 185                 190
Tyr Gly Ala Lys Asp Lys Gln Met
        195                 200
```

<210> SEQ ID NO: 3
<211> LENGTH: 199
<212> TYPE: PRT
<213> ORGANISM: Oryctolagus cuniculus
<400> SEQUENCE: 3

```
Met Ala Phe Met Glu His Ser Ala Leu Thr Pro His Arg Arg Glu Leu
 1               5                  10                  15
Cys Ser Arg Thr Ile Trp Leu Ala Arg Lys Ile Arg Ser Asp Leu Thr
            20                  25                  30
Ala Leu Thr Glu Ser Tyr Val Lys His Gln Gly Leu Asn Lys Asn Ile
        35                  40                  45
Asn Leu Asp Ser Val Asp Gly Val Pro Met Ala Ser Thr Asp Gln Trp
    50                  55                  60
Ser Glu Leu Thr Glu Ala Glu Arg Leu Gln Glu Asn Leu Gln Ala Tyr
65                  70                  75                  80
Arg Thr Phe His Ile Met Leu Ala Arg Leu Leu Glu Asp Gln Gln Val
                85                  90                  95
His Phe Thr Pro Ala Glu Gly Asp Phe His Gln Ala Ile His Thr Leu
```

RAW SEQUENCE LISTING DATE: 09/11/2003
PATENT APPLICATION: US/09/577,468 TIME: 08:51:35

Input Set : N:\Crf3\RULE60\09577468.raw.txt
Output Set: N:\CRF4\09112003\I577468.raw

```
                  100                 105                 110
       Leu Leu Gln Val Ala Ala Phe Ala Tyr Gln Ile Glu Glu Leu Met Val
               115                 120                 125
       Leu Leu Glu Cys Asn Ile Pro Pro Lys Asp Ala Asp Gly Thr Pro Val
           130                 135                 140
        Ile Gly Gly Asp Gly Leu Phe Glu Lys Lys Leu Trp Gly Leu Lys Val
        145                 150                 155                 160
        Leu Gln Glu Leu Ser His Trp Thr Val Arg Ser Ile His Asp Leu Arg
                        165                 170                 175
        Val Ile Ser Cys His Gln Thr Gly Ile Pro Ala His Gly Ser His Tyr
                    180                 185                 190
        Ile Ala Asn Asp Lys Glu Met
                195
<210> SEQ ID NO: 4
<211> LENGTH: 198
<212> TYPE: PRT
<213> ORGANISM: Mus musculus
<400> SEQUENCE: 4
        Met Ala Phe Ala Glu Gln Ser Pro Leu Thr Leu His Arg Arg Asp Leu
         1               5                  10                  15
        Cys Ser Arg Ser Ile Trp Leu Ala Arg Lys Ile Arg Ser Asp Leu Thr
                    20                  25                  30
        Ala Leu Met Glu Ser Tyr Val Lys His Gln Gly Leu Asn Lys Asn Ile
                35                  40                  45
        Ser Leu Asp Ser Val Asp Gly Val Pro Val Ala Ser Thr Asp Arg Trp
            50                  55                  60
        Ser Glu Met Thr Glu Ala Glu Arg Leu Gln Glu Asn Leu Gln Ala Tyr
        65                  70                  75                  80
        Arg Thr Phe Gln Gly Met Leu Thr Lys Leu Leu Glu Asp Gln Arg Val
                        85                  90                  95
        His Phe Thr Pro Thr Glu Gly Asp Phe His Gln Ala Ile His Thr Leu
                    100                 105                 110
        Thr Leu Gln Val Ser Ala Phe Ala Tyr Gln Leu Glu Glu Leu Met Ala
                115                 120                 125
        Leu Leu Glu Gln Lys Val Pro Glu Lys Glu Ala Asp Gly Met Pro Val
            130                 135                 140
        Thr Ile Gly Asp Gly Gly Leu Phe Glu Lys Lys Leu Trp Gly Leu Lys
        145                 150                 155                 160
        Val Leu Gln Glu Leu Ser Gln Trp Thr Val Arg Ser Ile His Asp Leu
                        165                 170                 175
        Arg Val Ile Ser Ser His His Met Gly Ile Ser Ala His Glu Ser His
                    180                 185                 190
        Tyr Gly Ala Lys Gln Met
                195
<210> SEQ ID NO: 5
<211> LENGTH: 195
<212> TYPE: PRT
<213> ORGANISM: Gallus gallus
<400> SEQUENCE: 5
```

RAW SEQUENCE LISTING DATE: 09/11/2003
PATENT APPLICATION: US/09/577,468 TIME: 08:51:35

Input Set : N:\Crf3\RULE60\09577468.raw.txt
Output Set: N:\CRF4\09112003\I577468.raw

```
147         Met Ala Ala Ala Asp Thr Pro Ser Ala Thr Leu Arg His His Asp Leu
148          1               5                  10                  15
149         Cys Ser Arg Gly Ile Arg Leu Ala Arg Lys Met Arg Ser Asp Val Thr
150                     20                  25                  30
151         Asp Leu Leu Asp Ile Tyr Val Glu Arg Gln Gly Leu Asp Ala Ser Ile
152                 35                  40                  45
153         Ser Val Ala Ala Val Asp Gly Val Pro Thr Ala Ala Val Glu Arg Trp
154             50                  55                  60
155         Ala Glu Gln Thr Gly Thr Gln Arg Leu Leu Asp Asn Leu Ala Ala Tyr
156         65                  70                  75                  80
157         Arg Ala Phe Arg Thr Leu Leu Ala Gln Met Leu Glu Glu Gln Arg Glu
158                         85                  90                  95
159         Leu Leu Gly Asp Thr Asp Ala Glu Leu Gly Pro Ala Leu Ala Ala Met
160                     100                 105                 110
161         Leu Leu Gln Val Ser Ala Phe Val Tyr His Leu Glu Glu Leu Leu Glu
162                 115                 120                 125
163         Leu Glu Ser Arg Gly Ala Pro Ala Glu Glu Gly Ser Glu Pro Pro Ala
164             130                 135                 140
165         Pro Pro Arg Leu Ser Leu Phe Glu Gln Lys Leu Arg Gly Leu Arg Val
166         145                 150                 155                 160
167         Leu Arg Glu Leu Ala Gln Trp Ala Val Arg Ser Val Arg Asp Leu Arg
168                         165                 170                 175
169         Gln Leu Ser Lys His Gly Pro Gly Ser Gly Ala Ala Leu Gly Leu Pro
170                     180                 185                 190
171         Glu Ser Gln
172                 195
174 <210> SEQ ID NO: 6
175 <211> LENGTH: 200
176 <212> TYPE: PRT
177 <213> ORGANISM: Artificial Sequence
178 <220> FEATURE:
179 <223> OTHER INFORMATION: Modified CNTF
180 <400> SEQUENCE: 6
181         Met Ala Phe Thr Glu His Ser Pro Leu Thr Pro His Arg Arg Asp Leu
182          1               5                  10                  15
183         Cys Ser Arg Ser Ile Trp Leu Ala Arg Lys Ile Arg Ser Asp Leu Thr
184                     20                  25                  30
185         Ala Leu Thr Glu Ser Tyr Val Lys His Gln Gly Leu Asn Lys Asn Ile
186                 35                  40                  45
187         Asn Leu Asp Ser Val Asp Gly Val Pro Val Ala Ser Thr Asp Arg Trp
188             50                  55                  60
189         Ser Glu Met Thr Glu Ala Glu Arg Leu Gln Glu Asn Leu Gln Ala Tyr
190         65                  70                  75                  80
191         Arg Thr Phe Gln Gly Met Leu Thr Lys Leu Leu Glu Asp Gln Arg Val
192                         85                  90                  95
193         His Phe Thr Pro Thr Glu Gly Asp Phe His Gln Ala Ile His Thr Leu
194                     100                 105                 110
195         Met Leu Gln Val Ser Ala Phe Ala Tyr Gln Leu Glu Glu Leu Met Val
196                 115                 120                 125
```

RAW SEQUENCE LISTING DATE: 09/11/2003
PATENT APPLICATION: US/09/577,468 TIME: 08:51:35

Input Set : N:\Crf3\RULE60\09577468.raw.txt
Output Set: N:\CRF4\09112003\I577468.raw

```
197         Leu Leu Glu Gln Lys Ile Pro Glu Asn Glu Ala Asp Gly Met Pro Ala
198             130                 135                 140
199         Thr Val Gly Asp Gly Gly Leu Phe Glu Lys Lys Leu Trp Gly Leu Lys
200         145                 150                 155                 160
201         Val Leu Gln Glu Leu Ser Gln Trp Thr Val Arg Ser Ile His Asp Leu
202                         165                 170                 175
203         Arg Val Ile Ser Ser His Gln Met Gly Ile Ser Ala Leu Glu Ser His
204                     180                 185                 190
205         Tyr Gly Ala Lys Asp Lys Gln Met
206                 195                 200
208 <210> SEQ ID NO: 7
209 <211> LENGTH: 200
210 <212> TYPE: PRT
211 <213> ORGANISM: Artificial Sequence
212 <220> FEATURE:
213 <223> OTHER INFORMATION: Modified CNTF
214 <400> SEQUENCE: 7
215         Met Ala Phe Ala Glu Gln Thr Pro Leu Thr Leu His Arg Arg Asp Leu
216          1               5                  10                  15
217         Cys Ser Arg Ser Ile Trp Leu Ala Arg Lys Ile Arg Ser Asp Leu Thr
218                     20                  25                  30
219         Ala Leu Met Glu Ser Tyr Val Lys His Gln Gly Leu Asn Lys Asn Ile
220                 35                  40                  45
221         Asn Leu Asp Ser Ala Asp Gly Met Pro Val Ala Ser Thr Asp Gln Trp
222             50                  55                  60
223         Ser Glu Leu Thr Glu Ala Glu Arg Leu Gln Glu Asn Leu Gln Ala Tyr
224         65                  70                  75                  80
225         Arg Thr Phe His Val Leu Leu Ala Arg Leu Leu Glu Asp Gln Gln Val
226                         85                  90                  95
227         His Phe Thr Pro Thr Glu Gly Asp Phe His Gln Ala Ile His Thr Leu
228                     100                 105                 110
229         Leu Leu Gln Val Ala Ala Phe Ala Tyr Gln Ile Glu Glu Leu Met Ile
230                 115                 120                 125
231         Leu Leu Glu Tyr Lys Ile Pro Arg Asn Glu Ala Asp Gly Met Pro Ile
232             130                 135                 140
233         Asn Val Gly Asp Gly Gly Leu Phe Glu Lys Lys Leu Trp Gly Leu Lys
234         145                 150                 155                 160
235         Val Leu Gln Glu Leu Ser Gln Trp Thr Val Arg Ser Ile His Asp Leu
236                         165                 170                 175
237         Arg Phe Ile Ser Ser His Gln Thr Gly Ile Pro Ala Arg Gly Ser His
238                     180                 185                 190
239         Tyr Ile Ala Asn Asn Lys Lys Met
240                 195                 200
242 <210> SEQ ID NO: 8
243 <211> LENGTH: 200
244 <212> TYPE: PRT
245 <213> ORGANISM: Artificial Sequence
246 <220> FEATURE:
247 <223> OTHER INFORMATION: Modified CNTF
```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 09/11/2003
PATENT APPLICATION: US/09/577,468 TIME: 08:51:36

Input Set : N:\Crf3\RULE60\09577468.raw.txt
Output Set: N:\CRF4\09112003\I577468.raw

Invalid Line Length:
The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:18; Line(s) 585
Seq#:19; Line(s) 594
Seq#:20; Line(s) 603,604
Seq#:21; Line(s) 613
Seq#:22; Line(s) 622
Seq#:23; Line(s) 631

VERIFICATION SUMMARY DATE: 09/11/2003
PATENT APPLICATION: **US/09/577,468** TIME: 08:51:36

Input Set : **N:\Crf3\RULE60\09577468.raw.txt**
Output Set: **N:\CRF4\09112003\I577468.raw**

STATISTICS SUMMARY DATE: 09/11/2003
PATENT APPLICATION: **US/09/577,468** TIME: 08:51:36

Input Set : **N:\Crf3\RULE60\09577468.raw.txt**
Output Set: **N:\CRF4\09112003\I577468.raw**

Application Serial Number: US/09/577,468
Alpha or Numeric or Xml: Numeric
Application Class:
Application File Date: 05-24-2000
Art Unit: OIPE
Software Application: FastSEQ3.0
Total Number of Sequences: 23
Total Nucleotides: 233
Total Amino Acids: 3361
Number of Errors: 0
Number of Warnings: 0
Number of Corrections: 0

MESSAGE SUMMARY